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| APPLICATION NO.                                               | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/631,941                                                    | 08/03/2000  | Dug In Lyu           | K-200               | 9312             |
| 34610                                                         | 7590        | 06/30/2005           | EXAMINER            |                  |
| FLESHNER & KIM, LLP<br>P.O. BOX 221200<br>CHANTILLY, VA 20153 |             |                      | STEVENS, ROBERTA A  |                  |
|                                                               |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                               |             |                      | 2665                |                  |
| DATE MAILED: 06/30/2005                                       |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. **09/631,941**Applicant(s) **LYU, DUG IN**Examiner **Roberta A. Shand**Art Unit **2665**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-8, 11-17 and 20-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ganesh (U.S. 6058136).

3. Regarding claims 1, 11 and 20, Ganesh teaches (abstract) a method of transmitting physical channels, a downlink data transmits from a base station to at least a mobile station, comprising: determining a non-orthogonality among each downlink physical channel (col. 4, lines 8-22; differently deciding each transmission starting point of each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels (fig. 2); and transmitting the downlink data through each physical channel having a different transmission starting point from the base station (col. 8, lines 3-63, Ganesh teaches that the PN offsets are assigned one sector at a time).

4. Regarding claims 3, 13 and 23, Ganesh teaches (abstract) a method of transmitting physical channels, comprising: determining a non-orthogonality among each downlink physical channel through a same frequency bandwidth (col. 4, lines 8-22; differently deciding each transmission starting point of each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels (fig. 2); and transmitting the

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downlink data through each physical channel having a different transmission starting point (col. 8, lines 3-63, Ganesh teaches that the PN offsets are assigned one sector at a time).

5. Regarding claims 4, 21, 22 and 24 Ganesh teaches (col. 9, line 51 – col. 10, line 4) differently deciding each transmitter of the base station, chip transmission starting point of a plurality of physical channels using different scrambling codes with one another; and transmitting the downlink data through the physical channels at the differently decided chip transmission starting points.

6. Regarding claims 5, 16, 26 Ganesh teaches (col. 10, lines 5-14) a time delay is determined by a value minimizing mutual interference to the plurality of physical channels scrambled with different scrambling codes.

7. Regarding claim 6, Ganesh teaches (col. 11, lines 5-11) time delay of the transmission starting points is value equaling a power strength of the downlink data transmission through the physical channel.

8. Regarding claims 7, 27, Ganesh teaches (col. 9, line 51 – col. 10, line 4) the time delay is shorter than the chip duration

9. Regarding claim 8, it is an inherent property of chip speed that the chip duration is a reciprocal number of the chip rate.

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10. Regarding claim 12, It is inherent in Ganesh's system which uses PN code offsets (phase shifts) that a mobile station checks all phase shifts and attempts to correlate them to a received input signal.

11. Regarding claim 14, Ganesh teaches (col. 4, line 34 – col. 5, line 8) the channels are transmitted with the same frequency.

12. Regarding claim 15, and 17, Ganesh teaches (col. 9, line 51 – col. 10, line 4) the specific codes are scrambling codes and the starting time is the starting time of the chip transmission.

13. Regarding claim 25 Ganesh teaches (col. 9, line 51 – col. 10, line 4) the transmission offset between the channels is determined based on a number of scrambling codes.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesh in view of O (U.S. 6061338).

16. Regarding claims 9 and 18, Ganesh teach does not teach that the starting points of the first and second channels have time interval corresponding to half of the chip duration.

17. O teaches a CDMA system in which a spread code generator may shift the phase of a spread code by half a chip (col.6, lines 21-34). It would have been obvious to one of ordinary skill in the art to designate the phase shift of the scrambling codes in the system of Ganesh to be half chip duration to quickly correlate a mobile station to the proper scrambling code.

18. Claims 10 and 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesh in view of McDonough (U.S. 6519237) .

19. Regarding claims 10, 19, Ganesh does not explicitly teach the time delay is determined by a reciprocal number value of the number of the physical channels scrambled with different scrambling codes.

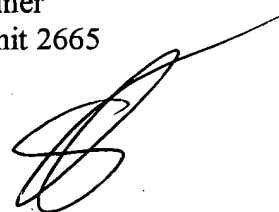
20. McDonough teaches a cellular diagram of PN code phase shifts that shows 512 possible phase shifts (fig. 1a). The phase shift between each PN code is starting point 64 bits, therefore the phase shifts are equally spaced (col. 2, lines 13-33). Since the phase shifts are equally spaced, the time interval of the phase shift must be equal to the reciprocal of the number of phase shifts representing different scrambling codes. It would have been obvious to one of ordinary skill in the art to equally space phase shifts in time for each of the scrambling codes used in Ganesh's invention to reduce interference among scrambling codes evenly within the cell.

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***Conclusion***

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.
2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Roberta A Shand  
Examiner  
Art Unit 2665



STEVEN NGUYEN  
PRIMARY EXAMINER